

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Source
NSPS

Mail Stop 524

MAR 16 1982

Mr. Mark R. Wagner
Environmental Affairs Department
Sohio Alaska Petroleum Company
~~3111 C. Street~~ Pouch 6-612
Anchorage, Alaska 99502

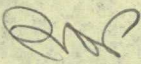
Dear Mr. Wagner:

We have received and reviewed your letter of March 8, 1982, concerning emission testing of the Prudhoe Bay gas turbines required by EPA Permit No. PSD-X80-09. While that permit requires turbine testing within 180 days of startup, we believe that an alternative testing plan is acceptable given the unusual circumstances and costs of the situation. However, we must remind you that EPA can require additional testing in the future in accordance with Section 114 of the Clean Air Act.

Therefore, testing of the two 2,500 HP turbines and one 4900 HP turbine at GC-2 produced water injection facilities, presently scheduled for start up in May 1982, will not be required within 180 days of start up as stated in Permit No. PSD-X80-09. Testing of the identical 2500 HP turbines scheduled to startup in 1984 at GC-1 and of the 4900 HP turbine scheduled to start up in late 1982 at GC-3 will be required within 180 days of start up. Depending on the results of these tests, EPA may then exempt the three turbines scheduled to start up in May 1982 from testing requirements. Please be reminded that EPA Permit No. PSD-X80-09 requires the Company to notify EPA and Alaska Department of Environmental Conservation within thirty (30) days of the start up date.

Should you have any questions, please contact Wayne Grotheer at (206) 442-1387.

Sincerely,


Robert A. Poss, Chief
Permits & Compliance Branch

cc: Dave Estes, ADEC
Ron Kreizenbeck, AOO

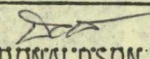

USEPA REG



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WGrotheer:e 3/10/82 (2219C)

CONCURRENCES

SYMBOL							
SURNAME	DONALDSON	JOHNSTON					
DATE	3-17-82	3-17-82					



SOHIO ALASKA PETROLEUM COMPANY

EPA, REGION X
DEX 4100

(206) 442-0295

442-7907 CONFIRM

Wayne F. Bor

6608

3111 "C" STREET
ANCHORAGE, ALASKA

MAIL: POUCH 6-612
ANCHORAGE, ALASKA 99502

SOHIO ALASKA COMMUNICATIONS CENTER

TELECOPY

TO: (Name & Title) MR. ROBERT POSE, CHIEF
(Department) AIR COMPLIANCE BRANCH MAIL STOP 524
(Company) EPA, REGION X
(Location) 1200 SIXTH AVE SEATTLE, WASH.

FROM: (Name & Title) MARK R. WAGNER
(Department) ENVIRONMENTAL AFFAIRS

SOHIO ALASKA PETROLEUM COMPANY

RECEIVED

MAR 9 1982

PAGES TO FOLLOW: 3

APPROVED:

Signature

COMMUNICATIONS
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Date

COMMUNICATIONS USE ONLY

IF ANY PROBLEMS IN RECEIVING PLEASE CALL

SOHIO

SOHIO ALASKA PETROLEUM COMPANY

Wayne F. Grotheer

MAIL ROOM
JUNE 1982

March 8, 1982
cc #42,752

Mr. Robert Poss
Chief, Permits Compliance Branch
USEPA, Region X
1200 Sixth Avenue
Seattle, Washington 98101

Subject: Air Emissions Compliance Testing for Prudhoe Bay, Alaska
Oil Field Facilities.

Dear Mr. Poss:

Sohio Alaska Petroleum Company will begin operation of new produced water injection facilities in the Prudhoe Bay Oil Field in May, 1982 which include three gas fired turbines permitted under Permit No. PSD-X80-09. As we discussed in a meeting on February 24, 1982 with Wayne Grotheer of your staff, these particular turbines are not presently fitted with the appropriate sample ports and Sohio therefore wishes EPA approval of a plan to compliance test similar turbines in lieu of those described above. Attached is a proposed alternative test plan which includes a detailed justification to support our request. Because the new facilities will begin start-up operations in May, 1982 we would need to initiate field changes for the sample ports by March 15, 1982. Your cooperation in responding to our request within this time frame would be greatly appreciated.

Mark R. Wagner

M. R. Wagner
Environmental Engineer

Attachments

cc: Mr. Tom Chapple - ADEC, Juneau
Mr. Doug Lowery - ADEC, Fairbanks
Mr. Ron Kreizenbeck - EPA, Juneau

MRW/kg

Alternative Turbine Compliance Test Plan

Background

The gas fired turbines permitted under Permit No. PSD-X80-09 are included in new produced water injection facilities at GC-2 in the Prudhoe Bay Oil Field. These turbines, which arrived in Prudhoe Bay during the 1981 sealift, are presently being installed and scheduled for start-up in May, 1982. All the turbines will be housed side by side in the same module and include two 2500 HP and one 4900 HP Ruston turbines. Because the capacity of only one of the small turbines will be required initially, after the initial equipment start-up one 2500 HP turbine and one 4900 HP turbine will be shut down and utilized as spares. In early 1983, however, because of increased produced water quantities, additional turbine driven pump capacity will be required. At that time either the spare 2500 HP turbine will be used continuously with 2500 HP turbine that was operational, or the two 2500 HP turbines will be shut down and used as spares with the 4900 HP turbine running continuously. Further produced water injection capacity will arrive on the 1983 sealift.

Due to the long lead time on design and construction of facilities for North Slope oil field operations, the sample port requirements necessary for air emissions compliance testing were overlooked. Thus, the above turbines did not arrive in Prudhoe Bay with the appropriate sample ports. Should each of these three turbines require compliance testing, each stack would require a field retrofit at a cost of greater than \$30,000 per stack. Rather than spend close to \$100,000 to serve compliance test needs, Sohio prefers to compliance similar turbines as outlined below.

Proposed Test Plan

Sohio has purchased and will install three 2500 HP Ruston turbines at GC-1 as a part of new waterflood facilities. These turbines will arrive in Prudhoe Bay on the 1983 sealift and will become operational in 1984. Sohio has purchased and will install one 4900 HP Ruston turbine at GC-3 as a part of new gas lift facilities. This turbine will arrive in Prudhoe Bay on the 1982 sealift and will become operational in late 1982. All four turbines are scheduled to run continuously and will be fitted with appropriate sample ports. Therefore, Sohio requests that these four turbines be compliance tested in lieu of the three produced water turbines described earlier.

Justification

Sohio believes that the proposed test plan is acceptable for the following reasons:

1. Identical turbines (3-2500 HP and 1-4900 HP) will become operational on a continuous basis shortly after the turbines requested for deletion and would be available for emissions testing.

2. The total NO_x emissions from the three produced water turbines (2-2500 HP and 1-4900 HP) is 265 tons per year versus 41,000 ton per year for permitted future facilities in Prudhoe Bay. The impacts of the three small turbines is insignificant in comparison.
3. Of the three produced water turbines, two will be on standby until 1983 and therefore not a source of air emissions.
4. The cost of field installation of sample ports in Prudhoe Bay (\$30,000 per stack) is excessive.
5. All other new Sohio turbines scheduled for installation in Prudhoe Bay have been designed with appropriate sample ports for emissions testing.
6. None of the three turbines are subject to NSPS testing requirements because they were constructed prior to October 3, 1982.
7. Permit No. PSD-X80-09, the permit under which the three produced water turbines are included, states that Sohio may submit for EPA approval an alternative test plan that considers compliance testing "one of a kind" rather than all turbines.